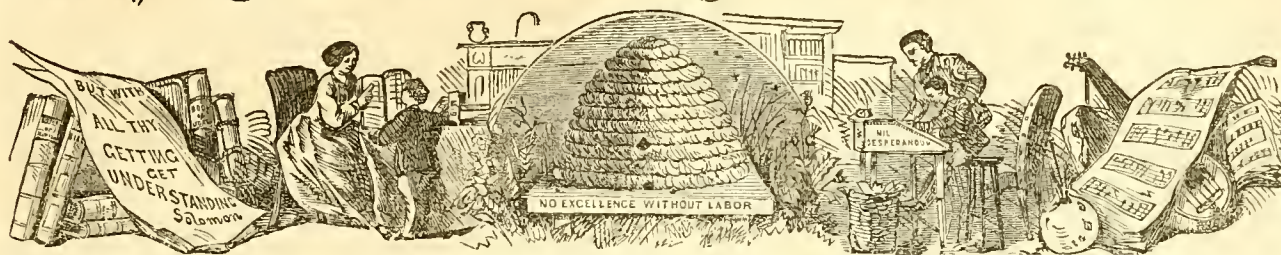


Holiness to the Lord!

# The Juvenile Instructor



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NO. 24.

## THE ARCTIC REGIONS.

WINTER is now close upon us and a short article about the Arctic regions will be in season. When you are reading this, if you are sitting by a cosy fireside, just look at the picture, and try to realize it, and it will be almost sure to cause, in fancy at least, a momentary chill to pass over you. Ice mountains, a ship frozen fast amongst them, and the sailors, probably running short of food, or, it may be, after sport, have left their vessel and armed, and clad in heavy robes, are evidently intent upon shooting the monstrous polar bear, the seal, walrus, or silver fox—which inhabit the far-off icy regions of the North.

This picture is no fanciful one, but it is a representation of the actual experience of hundreds. The rigor of the climate in those regions is inconceivable to those who live in countries situated in the temperate zone. Dwellers in the Rocky Mountain country think they have occasional sharp spells of weather, but the most severe cold in the ranges of the Wasatch, Oquirrh or Sierra Nevadas is temperate when compared with that within the polar circle.

You have perhaps all seen a thermometer, and know that it is an instrument, which, as its name implies, measures the heat or cold. It is a long glass tube containing quicksilver, attached to a chart on which the degrees are marked. An ordinary Fahrenheit thermometer is marked from the zero or 0 point down to twenty degrees below it, and to two hundred degrees above it. The quicksilver in the glass tube rises or falls according to the heat or cold. When very hot it sometime reaches, in this country, 110 or 115 degrees above zero. This has been the case during the past summer. But with the approach of winter and cold weather the quicksilver falls gradually lower. When as low as 32 above zero water freezes, and we then begin to think it is quite cold; but if

it should get to the zero point, and it does sometimes, it is considered very severe. This is rarely reached in these valleys; but sometimes in the mountains it falls perhaps ten or fifteen degrees below zero. But even this, terribly severe as it would be considered, is far milder than the weather of an Arctic winter, for there the quicksilver frequently falls to 40, and sometimes to 70 or 80 below zero. At such times the water of the sea is frozen like a solid rock and a sorry fate overtakes any ships that may be then cruising in the polar seas. They are sometimes crushed to pieces like nutshells; and if

they escape that they are bound in their icy prison until the mild weather returns and liberates them—and that is not to be looked for until six or eight months have passed away.

The crews of such ships not unfrequently perish of cold or famine. This was the fate, a little over twenty years ago, of the great English navigator, Sir John Franklin, and the crews under his command in the ships *Erebus* and *Terror*. For a good many years now, great efforts have been made at various times and by various nations to reach the pole, the belief being that if that task could be accomplished land, perhaps a new continent, would be discovered. The English have taken the lead in these polar explorations, and while engaged in one of them Franklin's ships were frozen in, and he and his men all perished of hunger and cold.

This, however, is not the fate of all explorers. Many of them go and return in safety; but when in the Arctic seas they all have to take every precaution to guard themselves against the cold. Some of them tell, that while on these exploring trips they have an enormous appetite for fatty substances or liquids, and that they can eat so many pounds of fat, or drink large quantities of oil every day. The climate has this effect





upon their constitutions, for, being so intensely cold, the human system needs much more heat-creating food than when at home, and the appetite craves oil or fat, which is just the kind of material to supply the heat which the system requires. Several expeditions of this kind are now exploring in the polar regions, one of them is American, under Captain Hall, and he is very sanguine that he will reach the pole, and plant thereon the "Flag of our Union"—the stars and stripes.

The aboriginal inhabitants of these northern regions are called Esquimaux Indians, and they are believed to have had the same origin as the North American Indians, their color and features being much alike. The Esquimaux, however, are much smaller, which is very likely owing to the intense cold of the climate they inhabit, and to the hardships they endure. The temperate or mild season of the year there, lasts only about two months, and during that time the natives are as busy as busy can be laying in whatever supplies they can procure to sustain themselves through their long winter. They live principally on fish, which they eat raw; they also eat enormous quantities of the blubber of the whale, and other fatty substances, obtained from animals they kill. The polar bear, fox, seal, walrus, whale and shark and wild fowl are plentiful, and of these the Esquimaux procures all he possibly can during his very brief summer.

Their dwellings are of the rudest kind, and in their construction little or no regard seems to be had to what white people would call comfort or convenience. Some of them are made of wood, others of stone. Many are built of the bones of the whale or walrus, the intestines of the former, and the skins of the latter, and of the seal, bear, etc., being used for partitions. Numbers of these people live in houses made of packed snow or ice, and Captain Hall, in a book giving an account of his sojourn among the Esquimaux, says that, after becoming somewhat acclimatized, and able to eat raw fish or flesh, and drink oil by the quart, one of the greatest enjoyments of his life, was to sleep, free of clothing, in one of these ice houses.

It has been often said that man is so constituted that he can adapt himself to and live under any circumstances, however unfavorable, in which his lot may be cast. The Esquimaux furnish a forcible illustration of the truth of this. Their country is the coldest and most barren known, affording the scantiest supply of the barest necessities; yet they manage to live. Their clothing is made of furs, of which they are said to be the best dressers in the world. They are also among the most skillful of boat builders, and they make them so light that the owner of one can carry it on his head. Men and women manage them very dexterously on the water; and in these fragile barks the former, it is said, fearless of storms, take to the ocean, and in their search for food boldly attack the whale and other monsters of the polar seas. These circumstances go to prove that the Esquimaux have adapted themselves to their situation, and that they turn to the best account the very limited resources at their command. But such inhospitable surroundings can never develop aught but the rudest and lowest phases of human life, and the most stunted and degraded specimens of humanity. This is the character of the Esquimaux, and though they manage to live and seem to be tolerably contented, in their case ignorance may be bliss. At any rate there is nothing in their condition that the poorest and most wretched in civilized life need envy; and there is not one of you who has not abundant cause for gratitude to God, that He has cast your lot under circumstances so much more favorable.

HE that loses his conscience has nothing left that is worth keeping.

HE that speaks ill of other men burns his own tongue.

## HISTORY OF THE CHURCH.

(Continued.)

OLD Tom, as Brockman called himself, no sooner had taken command than he gave orders for marching. At about half past nine on the morning of the 10th of September, the watchmen, posted on the tower of the Temple, discovered the mob approaching Nauvoo on the Carthage road. The instruction of the Governor of the State to Major Parker had been to organize the people of Nauvoo to defend themselves. Four companies of volunteers had been organized. When it was known that the mobbers under Brockman were marching towards the city, these companies were ordered to march out and meet them. By noon they had reached a copse of timber on the Carthage road, when John Wood, Esq., mayor of Quincy, Major Flood, Dr. Conyers and Messrs. Joel Rice and Benjamin Clifford, Jun., also of Quincy, arrived at Nauvoo. The Governor had given a commission to Major Flood to raise forces in Adams county for the protection of Nauvoo. These gentlemen were all indignant at the villainous conduct of the mob towards an oppressed and defenceless community. They were anxious, however, to avert the shedding of blood, and Major Wood proposed that they proceed to the mob camp and learn if there was any prospect of a compromise. Accordingly they repaired there in a carriage, and had an interview with Carlin and Brockman. That you may have a correct idea of the feelings and aims of the scoundrels composing the mob, we will give the proposals of Carlin and Brockman in full:

"September 10th, 1846.

"It is proposed, on behalf of the anti-Mormon forces assembled, camped in the vicinity of Nauvoo, by the officers in council:

"1st—That the writs in the hands of John Carlin shall be served, if the individuals against whom they exist, can be found.

"2d—The Mormons shall all give up their arms to some gentleman, to be agreed on by the parties, and any gun or other weapons shall be returned to the owner, whenever the owner of said gun has *bona fide* left the State with his goods and chattels.

"3d—The anti-Mormon forces shall be permitted to march peaceably through the city, we pledging ourselves to molest neither person nor property, unless attacked, in which case we will defend ourselves as best we can.

"4th—The Mormons shall leave the State in thirty days.

"5th—The anti-Mormons shall station a force at their discretion in the city, to see that the above terms are complied with.

"JOHN CARLIN.

"THOMAS S. BROCKMAN.

"In behalf of the officers in camp."

Carlin had been illegally appointed as a special constable to serve a writ on a supposed criminal. This was the only service it was claimed that he had to perform. But what a change had now taken place! He had become a dictator and claimed the exercise of more despotic power than any king could wield. He had not only called out soldiers by the hundreds from Hancock, the only county in which he could pretend to any jurisdiction as a constable, but from all the surrounding counties. Majors, colonels and other officers were summoned by him. And all this for the purpose of forming a *posse* to serve a constable's writ in Hancock! At the head of these forces which he had thus summoned he dictated terms to a city, threatening the people with his vengeance unless they complied with them! A so-called constable demanding the arms of the people under pains and penalties, and insisting on expelling them from their homes and from the State, because, forsooth, they were "Mormons!" This was one of the most outrageous proceedings ever attempted.



Carlin, "Old Tom" and their mob manifested but little respect for the Quincy gentlemen after giving them the terms upon which they would make a compromise, for, as they returned to Nauvoo, the mob fired several cannon balls over their heads. Major Flood had seen enough to satisfy him probably that it would be unpopular with the mob to defend or protect Nauvoo, so he declined to accept the commission of the Governor to raise forces in Adams county for that purpose, but as he was empowered to transfer the commission to some citizen of Adams county, he did so, and it was accepted by Benjamin Clifford, of Quincy. Clifford then took command of the volunteers. Under him Charles M. Johnson continued to act, as he had under Parker, as Colonel of the volunteers. William L. Cutler acted as Lieutenant-colonel and William Anderson as Aide-de-Camp. The first, second, third and fourth companies were under Captains Andrew L. Lamoreaux, Alexander McRae, Hiram Gates and Curtis E. Bolton. The next day William Anderson, having received permission, proceeded to choose a band of select men for flankers and sharpshooters. They were called the Spartan Band and were principally armed with repeating rifles. They organized at President D. H. Wells', who was then known as Esq. Wells, because of his being a magistrate, and who took a very active and prominent part in the defence of Nauvoo. William Anderson was chosen first captain and Alexander McRae second captain. Curtis E. Bolton also joined this band. The command of his and Captain McRae's company devolved upon them first lieutenants.

The mob had artillery, and seemed to be well supplied with ammunition of all kinds. For the want of other enemies to fire at, they, in passing corn-fields on both sides of the road, fired their grape and canister shot into them; they made great havoc in cutting down corn-stalks. There was no artillery in Nauvoo and it was felt to be greatly needed. Two steamboat shafts, which had lain for years on the banks of the Mississippi river were found. These shafts were hollow, and it suggested itself to some of the citizens that by cutting them in two, and plugging up one of the ends of each piece with iron fastened in its place by wrought iron bolts and made tight by filling up with spelter, a rude but effective kind of cannon might be manufactured. The plan was deemed feasible, and four of this kind of cannon were soon made ready for service. There were probably some fears felt as to whether they would answer the purpose or not, and the first discharge from them was doubtless watched with considerable interest. They might, after all the trouble, burst upon the first discharge. It was no time, however, for nervousness. The mob forces were at the people's doors, and they had to defend themselves against their attacks with such means as were at their command. But the shafts did good service. They stood the fire excellently, and they were the means of intimidating the mob and keeping them at bay. They had expected to make Nauvoo an easy prey, for they knew there was no artillery there. When, therefore, they heard the cannon, they did not know what the sound meant. The "Mormons" were better prepared for defence than they imagined them to be.

Major Flood, did not show his commission to "Old Tom" Brockman when he was at the mob camp. Major Wood and Joel Rice, therefore, walked out there again, and read the commission that Brockman might know that he was fighting forces which had been raised by the Governor's order. But neither he nor his forces cared for the Governor or his orders. They were resolved to drive the people from Nauvoo, and they drew nearer and nearer, advancing in solid columns against the city. There was naturally great anxiety felt by the people of the city. Major Parker, when he left, gave them reasons to hope that recruits would be sent, by the Governor, to their relief. But no reinforcements came, and it became evident that they must rely upon their own resources.

(To be continued.)

## QUESTIONS AND ANSWERS ON THE BOOK OF MORMON.

CATECHISM FOR SUNDAY SCHOOLS.

(Continued.)

LESSON FOR SUNDAY, DECEMBER 1ST, 1872.

Q.—Besides the plates of brass what weapon did Nephi obtain when he returned to Jerusalem?

A.—The sword of Laban.

Q.—As this was a famous weapon, and is yet in existence, having been preserved of the Lord, will you describe it?

A.—The hilt was of pure gold and of exceeding fine workmanship, and the blade was of the most precious steel.

Q.—I have said it was yet in existence, where is it kept?

A.—With the plates from which the Book of Mormon was translated by the Prophet Joseph, and other precious things which were hid up by the command of the Lord.

Q.—Did the Prophet Joseph translate all the engravings which were upon the plates that he received?

A.—No; a portion of those plates were sealed, and he was forbidden to translate the writings on them.

Q.—Will they yet be translated and given to the Saints?

A.—Yes; God has thus promised.

Q.—We have seen that the plates which Nephi obtained from the treasury of Laban were brass, were the plates from which the Prophet Joseph translated the Book of Mormon of this metal?

A.—No; they had the appearance of gold; hence, scoffers have sometimes called the Book of Mormon "the Golden Bible."

Q.—Mormon abridged this history which we have; but who hid the plates on which it was engraven?

A.—Moroni, the son of Mormon.

Q.—Where did he hide them?

A.—In the hill Cumorah.

Q.—Where is this hill?

A.—In the township of Manchester, Ontario county, New York.

Q.—Who delivered the plates to the Prophet Joseph?

A.—The angel Moroni, by the command of the Lord.

LESSON FOR SUNDAY, DECEMBER 15TH, 1872.

Q.—When Lehi and his family left Jerusalem they departed into the wilderness; where was the wilderness situated?

A.—Near the borders of the Red Sea.

Q.—They were joined in the wilderness by Ishmael and his family; how many were there of them?

A.—Ishmael, his wife, two sons and their families, and five daughters.

Q.—For what purpose were they led to join Lehi and his family?

A.—The Lord commanded Lehi to send for him that his sons might take his daughters to be their wives.

Q.—Did they marry them?

A.—Yes; the eldest became the wife of Zoram; the other four became the wives of Laman, Lemuel, Sam and Nephi.

Q.—How were these people guided in their travels in the wilderness?

A.—By an instrument called Liahona.

Q.—Describe this instrument?

A.—It was a round ball, made of fine brass and of curious workmanship. Within the ball were two spindles, and one of these pointed the way they should travel.

Q.—You describe an instrument something like our modern compass; in what did it differ in its working from what we call a compass?

A.—The pointers or spindles which were in the Liahona, worked according to the faith, diligence and heed which were given to them.

Q.—Would it work or point the way they should go when they murmured, were rebellious or did wrong?

A.—At such times it would not work.

Q.—What other peculiarity was there about the Liahona?

A.—There was written upon it instruction from the Lord.

Q.—Was this writing always the same?

A.—No; it was changed from time to time by the power of God, according to their faith and diligence in paying attention to it.

Q.—What is the interpretation of the word Liahona?

A.—It means a compass.

Q.—By whom was the Liahona made?

A.—The Lord prepared it.

(To be Continued.)



# The Juvenile Instructor.

GEORGE Q. CANNON

EDITOR.

SATURDAY, NOVEMBER 23, 1872.

## EDITORIAL THOUGHTS.

**T**HE Epizootic is the theme for editorial thought or comment in this number, and those of you who have seen and read the newspapers for the past two or three weeks, have become familiarized with the word, odd and strange as it is. It seems as though excitement and sensation are the order of the day now. A few weeks back, in fact for several months past, the principal topic of conversation over the whole land, has been the presidential election; and just as that event reached its accomplishment, another tidal wave, by way of sensation, sweeps over the entire country in the epizootic, the name given to a disease which attacked the horses in the eastern States some two or three weeks back.

The word epizootic is another of those scientific terms derived from the Greek, and means literally a disease upon animals; and as the horses in nearly every eastern State have been attacked with a malady somewhat similar to that which human beings call the influenza, the term epizootic has been applied to it, because of its general prevalence among this class of animals. Any disease among human beings as prevalent as this is among the horses, would be called an epidemic, that word meaning a disease wide-spread or general among the people. So much for the meaning of the word, now for a few reflections as to its effects.

Here in Salt Lake we can form but a very faint idea of the amount of inconvenience caused by such a wide-spread disease among the horses. The largest city in the Territory of Utah—Salt Lake City—is very small when compared with the principal cities of the East; and the amount of business transacted, and the number of horses used for freighting purposes, here are correspondingly small. However, should the epizootic reach us, its effects would be very unpleasant, but nothing at all when contrasted with such cities as New York, Philadelphia, Boston, Pittsburgh, Cincinnati and many others. In all the above-named places extensive lines of street railroad exist, and they have become such a public necessity that tens of thousands of passengers are carried daily to and from business thereon. Just picture to yourselves, if you can, the inconvenience which must result to the public when, as has been the case in many eastern cities lately, very nearly all the horses are too sick to work, and the thousands of street cars are standing still for want of animals.

But serious as has been the inconvenience thus caused; the loss to the great commercial interests of the land has been beyond computation. In an extensive country like ours, between nearly all parts of which there is railway connection, the amount of freight of all kinds transported, both by land and water, is inconceivable. Well, tens of thousands, and perhaps millions, of tons of this freight have been delayed, on account of the epizootic or horse disease, and there has been no possible remedy for it. It is true that in a good many places the aid of oxen and of men has been brought into requisition; but all that could be done by such means has proved of trifling avail in remedying the evil.

If the epizootic had been confined to one or two States it would have been serious enough, but as scarcely one has escaped, and it is impossible to estimate the amount of pecuniary loss, or personal discomfort which have ensued therefrom, it has risen almost to a national calamity.

To the minds of those enlightened by the Spirit of Truth, it is salutary and instructive to contemplate the seemingly simple means with which the Almighty can bring upon men evils which they can not remedy. The people of this Territory have learned this lesson well, in their experience during the several grasshopper visitations, since the arrival of the pioneers in 1847. It is scarcely possible to think of anything more insignificant than a grasshopper. Look at it! It is ugly, almost repulsive, and, isolated, it is utterly powerless for evil. But when millions of them come together they are a dreadful scourge. In a few hours, without noise or display of any kind, they destroy the labors of a season and reduce tens of thousands of people to the verge of famine; and no device of man, with all his power, ingenuity, wisdom or skill, avails the least to stay their ravages. Well may they be called the Lord's army, for, in working out the mission assigned them, they are irresistible—omnipotent.

The horse disease is another illustration in point. Who would pay any particular attention or feel the least alarm when looking at a horse troubled with a cough or running at the eyes and nostrils? One would be very apt to think, Oh it is only a cold, and will be all right in a day or two! But so far as the epizootic is concerned, the day or two has gone by, the disease has spread with surprising rapidity, afflicting tens of thousands of horses, and in its progress a fatal disease—the dropsy—has been developed, which has caused the death of many hundreds of these valuable animals.

There is one thing in connection with the epizootic worthy of note, and to which we desire to direct your attention. The Book of Mormon contains a paragraph foretelling the destruction of the horses throughout this land. We very well know that this book is rejected and wholly disregarded by the millions, but the Latter-day Saints regard it as equally sacred with the Bible, and it contains many revelations regarding the destiny of this nation and generation. One of these revelations, to be found on page 478, paragraph 12, foretells a time when, if the people would not repent, the Lord would destroy their horses. Who can say that the epizootic has no connection with that threat of Divine displeasure, and has not come, at least in partial fulfillment thereof? Many would no doubt be inclined to cry "fanaticism" at the mention of such a thing; but there is the revelation for all to read who will, and none can deny that in this visitation the horses of the nation have been stricken, that man's skill to stay the progress of the disease has been powerless, and that the hand of the afflicter has been omnipotent.

We would not suppose that, were the revelation we have referred to now to be published in every newspaper in the land, it would have any effect in convincing the scoffer and unbeliever; that revelation, however, in connection with this prevalent malady, can not be disregarded by the believer in modern revelation. But such visitations, whether in the past, present or future, can only be understood by those whose minds are enlightened so as to understand the signs of the times; for the scoffer and unbeliever of to-day, like their predecessors in the days of the Redeemer, would not be convinced though one rose from the dead.

MEN who are exceedingly blind to their own faults, are oftentimes exceedingly quick-sighted to the faults of others.

SENTIMENTS of friendship which flow from the heart cannot be frozen in adversity.



THE JACKAL.

THIS is a very good representation of the Jackal, the name given to an animal almost generally despised, because, though partaking largely of the nature of the dog, fox and wolf, he possesses a combination of the worse qualities of the three, for he lacks the cunning or ingenuity of the fox, the courage of the wolf and the nobility of the dog. He is a native of Africa and Asia, and is generally found in all localities inhabited by the lion. He has been called the "lion's provider," but if he has any right to that nickname it is without any intention on his part of being so. The reason why he is so called is as follows: Jackals frequently go in large packs in search of food, and as they run they make an abominable noise, something between the bark of the dog and the howl of the wolf, like the coyote of the plains. The lion knows what this means, and frequently follows in the track of the jackals, and as soon as they have torn down a deer, or some other choice animal, the dread "king of the forest" makes his appearance on the scene, and as his presence puts his kind providers to flight, he takes his fill of their game, leaving them the refuse, so that "lion's provider" is, after all, not a very inappropriate name.

The part played by the lion on such occasions is not at all noble or magnanimous, for he is strong enough and sufficiently fleet of foot to provide for himself; but it seems to be the law through all the ranks of fallen nature, that the strong shall prey



upon the weak, and both lion and jackal are no exception to this rule.

The body of this animal is about the same size as that of the fox, but his legs are longer; and unlike the fox or the wolf, who shun man, it is said that the jackal rather prefers his society, like the dog; and if caught very young he can be domesticated like the dog. There is, however, no friendship between the two animals, and a dog and a jackal never meet without a fight.

The jackal preys on deer, sheep, the denizens of the poultry yard, and on almost anything smaller and weaker than himself. He is never known to attack man, like the wolf; but is not restrained from so doing by any compunctions of conscience, but lacks the courage to do so. Taking him all in all he is a mean contemptible fellow, and has deservedly but few or no friends among animals or men.

Go to a brick yard and take a brick freshly moulded, and press a leaf upon it; a gentle pressure of the finger will suffice. Yet subject that brick to the kiln, and it will come back ineffaceable. Build it into a house and you may see it across the street.

The child's mind is the moist brick.

[For the Juvenile Instructor.]

A CHILD'S FAITH AND CONFIDENCE IN GOD.

"OH mother! what will you do?" said a bright, little maiden of twelve years, as she came tripping into the house after carrying home some work her mother had finished that morning. "Mrs. Smith says she cannot let you have the flour she promised you, for, if she does, her own family will be short. I told her if she could only spare you a little, you would be glad, for father and brother had gone to the field without breakfast; but she said, no, she could not let you have it."

"Well, my dear," said her mother, "did you go to the other places I told you of?"

"Yes, mother, but they are all entirely out of flour. The mill is broken, and grinding cannot be done for some time, so what will pa do when he comes for his dinner?"

"I do not know what to do," said the mother, "if I cannot get it where it is owing to me."

"O ma!" cried out little Jane, three years younger than her sister, "I know what you can do."

"What," asked her mother?"

"Why," said Jane, "you can do as you have done before. You can ask our Father in heaven to give us some. You know He always does, when you ask Him."

"Ess," cried little baby Johnny, three years old, "ess, mamma, lets say pay's (prayers) and Dod will send some flour."

How the mother's heart rejoiced, as she clasped her children to her bosom, and thanked God for the precious gift of faith He had bestowed on her babes.

She then took her children by the hand, and knelt down and prayed to her Heavenly Father to give them that day their daily bread, and to let peace rest down on their father's heart, for he was troubled.

The children, though hungry, rose from their knees with cheerful faces.

"There," said Jane, "you will have flour in a short time, ma, for you always do when you ask our Father for it. He does not say no like some people do."

The father of the children, Joseph Hall, was an industrious, hard-working farmer; but he had lost all he owned, team, cows, crops and everything he possessed of farm property, in an Indian war; and he had struggled hard for several years to support his family, and to replace his team, that he might be able to raise another crop. His wife was always delicate in health; but being a milliner, she strove, by working with her needle as much as possible, to assist her husband in providing for her family. Her children being all small at the time of his losses, and requiring a good deal of attention, she was often obliged to sit up at night, after the rest had gone to bed, to finish her work. A such times, being over fatigued, her spirits would become depressed, and she would sometimes be led to exclaim, "Why am I called to pass through such trying scenes of poverty, while my relatives are enjoying the luxuries of life?"

Such had been her thoughts on the morning in question; but seeing her husband come in to kiss the little ones good bye before going to work, and seeing him look discouraged at not having been able to get them flour, she bade him good morning with a cheerful smile, and told him to come home early and she would have a nice dinner ready for him; but having sent home her work, we see how, for the time being, she was disappointed.

After lifting her heart in prayer to God, she again took up her needle, while her little girls washed the dishes and swept the floor; but scarcely had she done so, when little Jane again came running into the room, crying out:

"Oh ma! come and see, there is a girl coming up the garden with a big pan of flour. Didn't I tell you our Father would send some, ma. We must thank God for that."



Going into the kitchen, Mrs. Hall found one of the neighbor's children that wanted to get some fruit for flour. She gave the child the fruit, and took the flour with a thankful heart, realizing that what she had thought a trial was indeed a rich blessing, for it had taught her children a lesson of faith and confidence that they would not forget as they grew older. But that was not the end of their blessings, for, shortly after, two ladies who were owing Mrs. Hall for work, came and asked her as a favor if she would take flour for her pay, as they had been disappointed in getting her the money. She told them she would.

When her husband came home at noon, she told him to look at the sack in the corner. He asked what was in it. She replied "flour."

"Whose is it?" he inquired.

"Ours."

"Why, mother," said he, "where did you get it?"

She told him all the events of the morning, and of Jano's faith and confidence in God. Mr. Hall asked if it was not about ten o'clock that she got the flour. She told him it was; "but why did he ask?"

Because, he told her, about that time he was so depressed in spirits that he could not work, and he prayed fervently to God that He would open the way that they might be able to get such things as they needed, and he said, "a spirit of peace rested on me from that time, and I knew that my prayers were answered."

They shed tears of thankfulness together, and acknowledged the truth of the words of the Psalmist David, when he said: "I have been young, and now am old; yet have I not seen the righteous forsaken, nor his seed begging bread."

A. R.

## ICHTHYOLOGY.

**WHAT** a curious word! How thoroughly un-English it looks and sounds; but do not be disgusted with it on that account, for when understood it is very expressive. It is a scientific term, and most of this class of words are as un-English in sound and appearance as this. They are nearly all taken from the Greek—a language that has not been spoken now for more than two thousand years. If, instead of this word, we had said "Something about Fishes," you would have had no difficulty in understanding it, and that is very nearly the meaning in English of ichthyology. But it is not near so neat and, to those who understand Greek roots well, not near so expressive as ichthyology, which, made up of two words meaning a discourse on fishes, is the name given to the science which explains all about the structure and habits of the denizens of the deep.

Some of you may remember that, a few numbers back, we promised to tell you something about a few of the most curious fishes known to naturalists. In a short article like this, the space devoted to any particular one must necessarily be very brief, for we shall call your attention to fishes which shoot their prey; to others which hunt it like dogs trained to the business; and to others again which angle for it, with rod and line like anglers. Then others will be noticed which are armed with spear, saw, knout and lasso, and finally, with the power to stun or kill their enemies with an electric shock. To all of these, in passing along, we shall give a few words—enough to show that ichthyology, or the science which treats of the structure and habits of fishes is not lacking in interest, and is perhaps as worthy the attention of the student of natural history as any other department of it.

To some of you it may be new to hear that in the ocean there are fish which catch their food with rod and line; and others that hunt and shoot their prey, and others again, which catch it with

a lasso; but strange as this may all seem, it is true, if the researches and writings of naturalists are to be relied on; and in hopes of amusing and instructing you we shall tell you something about a few of these curious fishes.

The first we shall mention is the shooting fish, a beautiful little creature which inhabits the seas lying between India and Japan. His name is as curious as his habits, for he is called the choetodon. He is a sly cunning fish, this choetodon and delights occasionally in a dinner or supper of flies, which he always shoots before he eats.

Most of you, we have no doubt, have sometimes amused yourselves and plagued your companions by blowing peas, grains of wheat, or something of this kind, through a small tube, made of tin, wood or the hollowed stem of some reed. Well, this is just the way the choetodon shoots his flies. His snout is an elongated tube, and, watching the fly on some spray, leaf or twig growing near the water's edge, he stealthily approaches, lifts his tube or popgun just above the water, and discharges one drop, with a good deal of force, at his game, causing the latter to fall, stunned, into the water, and then gobbles him up. Our sportsman very rarely misses his mark, and as the game he is after is plentiful, he soon bags enough for a meal.

But curious as this is, it is even surpassed by the angler, which, with baited line, angles for his prey, and when caught deposits it in sacks, very much like nets, whence, when there is enough for a meal, he conveys them to his mouth. There are several species of the angler, but the most noted is the very ugly, ill-shapen frog fish. He has a large head, something like that of a frog, from which is name his derived. He is occasionally caught in the British seas, and as a general thing is between two and three feet long, but is sometimes found six feet long. He has a very large mouth, and is a very clumsy fish, and consequently a poor swimmer. His fishing tackle consists of two stout tentacles, or fleshy rods, which grow from his nose, and are gradually tapered off, like ordinary fishing rods. From the end of each of these tentacles grows a very slender filament or thread—the fish lines—each of which terminates with a small morsel of membrane—the bait at the end of the lines. Being ugly enough to frighten everything off, and too clumsy to swim after his prey, the question may naturally be asked, "How does he secure his food?" Cunning and his fishing tackle are brought into play to accomplish this, and in the following manner: Lying on the bottom of the ocean—he frequents shallow portions—he stirs up the mud with his tail and fins, and at the same time throws out his fishing tackle, keeping his lines and bait moving briskly. The mud roils the water so that it completely hides him, and the numerous little fishes on the look-out for a morsel eagerly seize the bait at the end of his lines, and are instantly conveyed to his large nets for safe keeping. This process is repeated until game enough for a meal is netted, when the angler has a feast.

There are several kinds of fish that hunt their prey, and run it down as dogs will a fox, among them the savage pike, and the favorite trout. But we shall make special mention here of the porpoise, herds, or rather shoals, of which are sometimes seen by the emigrants when crossing the Atlantic. They are very numerous, and as large numbers of them go together, and they roll and tumble over each other almost like a lot of bathers gambolling in shallow water, they are easily distinguished. The full grown porpoise is six feet long, and is covered about an inch thick with fat, beneath which the flesh appears, and that is a good deal like the flesh of the hog. Their snout is also something like that of the hog, and they root in the mud for food. Because of these peculiarities the porpoise, in some parts of England, by dwellers on or near the sea coast, is called the porpoise pig. A porpoise hunt, or rather a hunt by them for herring, mackerel, or sand eels, is said to be quite an exciting affair to those who witness it. They surround their prey,



and gradually hem them into a small, and then a smaller space, until they are surrounded by a rampart of porpoises. A writer in an English journal furnishes an account of a hunt of this kind which he witnessed in the English Channel. The game was a shoal of sand eels, in full pursuit of which was a pack of porpoises. Every effort of the former to break the line of their enemies was in vain, and finally, completely edged in, they fell victims to the voracity of the latter. The movements of the porpoises were thoroughly systematic, and seemed to indicate as complete an understanding and concert of action among them as if they had been a well trained pack of dogs.

Having now briefly noticed the shooting, angling and hunting fishes, we will devote a short space to others equally as curious—those armed with formidable weapons. First among them we will mention the shark, whose jaws are an enormous pair of shears, and being provided with a large number of formidable teeth he can clip a man in two with very little effort. The shark probably occupies the same relative position in the ocean as the lion or tiger on the land—he is the king and dread of fishes as they are of beasts.

Next to the shark, probably, is the sword fish, which not unfrequently weighs six hundred pounds. He is a ferocious fellow, and is armed with a terrible sword or dagger, which grows from his nose. With this weapon, when enraged, he sometimes pierces the bottoms of ships; but the great object of his life seems to be to kill the whale—the largest of all the denizens of the great deep. The saw fish is also a large and powerful fish, and a mortal enemy of the whale. Its weapon is a good deal like that of the sword fish, only it is jagged on each edge like the teeth of a saw.

Some of you may have read about the knout—an instrument used in Russia for the punishment of criminals. It is a whip, consisting of a number of leather and wire thongs plaited together, and is one of the most terrible instruments of torture known. Whether it was made in imitation of a weapon possessed by one of the denizens of the deep, we do not know; but it is certain that the tail of the thresher, or fox-shark very much resembles the Russian knout. The upper lobe of the tail of this fish is almost as long as the fish itself, and is curved like a scythe, and with it the fox-shark can and does inflict tremendous blows upon its opponents. Battles with the whale and the sword fish and fox-shark are quite common. The sword fish attacks the whale from below, driving him to the surface; when the fox-shark uses his knout like a battering ram on the body of the whale, driving him below again, and in this way the combat is continued until the whale is dispatched.

The lasso with which most of you are familiar, is also a weapon possessed by fishes, and a large lasso, or devil, fish is one of the most terrible of old ocean's inhabitants. These lassoes are like long slender arms, there being several to each fish. They surround the body of their possessor, the mouth of the creature being in the centre of the body, almost like a large hole or slit in the centre of a half dollar. Each of these lassoes is provided with a row of discs or suckers, and in catching its prey, or contending with its enemies it throws out its lassoes or arms, the suckers immediately clinging thereto with the tenacity of death, and once caught escape is impossible, every struggle but strengthening the hold of the lasso.

Other fishes have the power to give a strong electric shock to an enemy, the electric eel, being the most highly endowed in this particular. His power is so much dreaded by sailors that they invariably give him a long range, he by his shocks being able to render a man completely powerless.

For fear of wearying you we will now close. The narwhal and other members of the piscatorial tribes curiously endowed might be mentioned, but enough has been said to show you that Nature in her developments in the great deep has afforded man models for many of the weapons of warfare which

he possesses; and although they are regarded as the result only of human ingenuity and skill, it is very likely that the inventive genius of the early inhabitants of the world, who, it is safe to presume, were chiefly hunters and fishers, was stimulated and developed by the models to be found in the animal creation.

[For the *Juvenile Instructor*.

## Chemistry of Common Things.

### MARBLE.

IT may be remembered that chalk, marble, limestone and coral are different forms of carbonate of lime; and that lime is the oxide of a beautiful white metal, one of the elementary bodies—calcium. Marble is sometimes very beautiful and when of the right kind for statuary purposes is very valuable. We have marble in several places in this Territory. Some of us may have noticed specimens of Utah marble exhibited by Messrs Morris and Evans, of this city, at the late Fair.

There are many varieties of marble used for ornamental purposes that are not entirely carbonate of lime; even the celebrated Carrara marble, known as Italian marble and extensively used both in ancient and modern times, contains sand and other ingredients mixed with it. Some of the colored marbles owe their color to oxides of various metals, iron especially; when that metal enters largely into the composition of any limestone, it is called "ferruginous limestone," and in mineralogy ferro-calcite, from ferrum, iron. Limestone in which lead is present in large quantities, is called plumbo-calcite, from plumbum, lead.

We may remember that all limestones are of marine origin; they were formed from mud at the bottom of ancient seas. They are being formed *now* in just the same way as they were formed anciently. Sea water contains carbonate of lime, some of this is food for the shell fish and corals; the bulk of it subsides and forms the bed of the ocean. When we see fossils imbedded in limestone we can understand the manner in which they came there: they died at the bottom of the sea and were gradually buried up in the mud. Sometimes very perfect specimens are found; these were such as were in positions favorable to the preservation of their structure. It is true we do not see the fish, or shell, or coral, but merely a resemblance of the individual, the organic matter is replaced by inorganic, as noticed in a former article on petrifications.

Many of the colors of limestones were imparted by the decomposition of various animals, carbonaceous substances; thus, black limestones burn white because the carbon is consumed when making lime. If metallic oxides give the color to marble, the color given to a bead of borax will reveal the metal present. In some limestones the smell is such, when suddenly struck with a hammer, that the organic origin of the coloring matter may be known. When the odor of bitumen or petroleum is perceived B. B. (before the blowpipe), or in the fire, the color of the flame will reveal the presence of those bodies.

As a general thing the variegated colors seen in bands and cloudings in marble, the different varieties of which give the beauty and character to them, when polished, are caused by mica, chlorite and serpentine, which were formed in them when crystallizing. Many changes have taken place in the sedimentary matter of ancient seas, pressure and heat especially, as well as chemical changes have caused transformations by which rocks have entirely lost their former character. Rocks that were formed by coral reefs ("madreporic marble"); "shell marble," so called from the fossil shells it contains, and encrinoidal marble," that containing crinoidal remains, may be seen in



very different states, according to the changes they have undergone by the modifying action of heat and probably by volcanic agency.

"Ruin marble" is a kind of calcareous mud that received its character by the infiltration of the oxide of iron; this kind, when polished, exhibits figures of castles, fortifications, temples, etc., in ruins, hence the name. "Landscape rock," which frequently resembles views of scenery as taken by an artist, is a rock that has derived its structure from organic matter buried up in calcareous sediment.

The different marbles used by the ancients, especially by the luxurious Romans, are now known as verd-antique, Parian marble for statuary; Egyptian, Languedoc marble, etc., are used for architectural purposes.

Marble may be decomposed by heat, the carbonic acid gas is thus driven off and lime remains, in every respect it behaves like the common limestone. It may be decomposed also by hydrochloric acid, in which experiment the lime unites with the chlorine of the acid, forming chloride of lime, and carbonic acid gas is liberated.

BETH.

## QUESTIONS AND ANSWERS ON THE BIBLE.

### CATECHISM FOR SUNDAY SCHOOLS,

#### LESSON FOR SUNDAY, DECEMBER 1ST, 1872.

- Q.—What is the Bible?  
 A.—The sacred Scriptures, containing the revelations of God.  
 Q.—By what other name is it commonly called?  
 A.—The Old and New Testament.  
 Q.—What did the Prophet Ezekiel call it?  
 A.—The Stick of Judah.  
 Q.—Why did he call it the Stick of Judah?  
 A.—To distinguish it from the Stick of Ephraim.  
 Q.—What is the Stick of Ephraim?  
 A.—The Book of Mormon.  
 Q.—What is the name of the first book in the Bible?  
 A.—Genesis.  
 Q.—Who wrote that book?  
 A.—Moses.  
 Q.—In the beginning what did God create?  
 A.—The heaven and the earth.  
 Q.—In what condition was the earth?  
 A.—Without form and void.  
 Q.—What was upon the face of the deep?  
 A.—Darkness.  
 Q.—What moved upon the face of the waters?  
 A.—The Spirit of God.  
 Q.—What was done on the first day?  
 A.—God said "Let there be light; and there was light."  
 Q.—What did God do with the light?  
 A.—He divided it from the darkness.  
 Q.—What did He call the light?  
 A.—Day.  
 Q.—What did He call the darkness?  
 A.—Night.  
 Q.—What was done on the second day?  
 A.—God made the firmament, which he called heaven.  
 Q.—How was the firmament situated?  
 A.—In the midst of the waters.

#### LESSON FOR SUNDAY, DECEMBER 8TH, 1872.

- Q.—What was done on the third day?  
 A.—God caused the dry land to appear, which He called earth.  
 Q.—What were the waters then called?  
 A.—Seas.  
 Q.—What did God cause the earth to bring forth?  
 A.—Grass, herbs and trees.  
 Q.—What was done on the fourth day?  
 A.—God made lights in the firmament of the heaven.

Q.—For what purpose did God make these lights?

A.—For signs and for seasons, and for days and years.

Q.—How many great lights were placed in the heavens?

A.—Two.

Q.—What was the greater light for?

A.—To rule the day.

Q.—What was the lesser light for?

A.—To rule the night.

Q.—What was done on the fifth day?

A.—God created the fish in the sea, and the fowls in the air.

Q.—What did God say when He blessed them?

A.—Be fruitful and multiply.

Q.—What was done on the sixth day?

A.—God created every living thing upon the earth.

Q.—Who was to have dominion over the earth?

A.—Man.

Q.—In what form was man created?

A.—"God created man in His own image and likeness, male and female created He them."

Q.—When God blessed them, what did He say?

A.—Be fruitful and multiply, and replenish the earth and subdue it?

Q.—What else were they to have dominion over?

A.—The fish of the sea, the fowl of the air, and over every living thing upon the earth.

Q.—What food did God say He had prepared for man?

A.—Fruit and herbs bearing seed.

Q.—What food had God prepared for the fowls of the air and beasts of the earth?

A.—Every green herb.

Q.—After God had made everything how did He look upon the result of His work.

A.—He saw it was very good.

(To be continued.)

## Selected Poetry.

### HOW TO BE BEAUTIFUL WHEN OLD.

How to be beautiful when old?  
 I can't tell you, maiden fair—  
 Not by lotions, dyes and pigments;  
 Not by washes for your hair.  
 While you're young be pure and gentle;  
 Keep your passions well controlled,  
 Walk, work, and do your duty,  
 You'll be handsome when you're old.

Snow-white locks are fair as golden,  
 Grey as lovely as the brown,  
 And the smiles of age more pleasant  
 Than a youthful beauty's frown.  
 'Tis the soul that shapes the features,  
 Fires the eye, attunes the voice;  
 Sweet sixteen, be these your maxims,  
 When you're sixty you'll rejoice.

ONE cannot always be a hero, but one may always be a man.

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